UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/975,250	10/12/2001	Takuhito Ueno	110863	8843

25944 7590 05/17/2005	EXAMINER
OLIFF & BERRIDGE, PLC	DIVINE, LUCAS

ART UNIT	PAPER NUMBER
2624	

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DATE MAILED: 05/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	09/975,250	UENO ET AL.
	Examiner	Art Unit	
	Lucas Divine	2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133)..
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☐ Responsive to communication(s) filed on *12 October 2001*.

2a) ☐ This action is **FINAL.**   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-8* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-8* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☒ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on *12 October 2001* is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☒ All   b) ☐ Some * c) ☐ None of:

      1. ☒ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date *10/12/01*.

4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

Specification

1.   The title of the invention is not descriptive. A new title is required that is clearly

indicative of the invention to which the claims are directed.

Drawings

2.   The drawings are objected to under 37 CFR 1.83(a). The drawings must show every

feature of the invention specified in the claims. Therefore, the 'deciding portion (or step) for

deciding a receiving speed **based on a returning time** from the power saving mode to a normal

mode and a capacity of said storing portion' must be shown or the feature(s) canceled from the

claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to

the Office action to avoid abandonment of the application. Any amended replacement drawing

sheet should include all of the figures appearing on the immediate prior version of the sheet,

even if only one figure is being amended. The figure or figure number of an amended drawing

should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure

must be removed from the replacement sheet, and where necessary, the remaining figures must

be renumbered and appropriate changes made to the brief description of the several views of the

drawings for consistency. Additional replacement sheets may be necessary to show the

renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an

application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet"

pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will

be notified and informed of any required corrective action in the next Office action. The

objection to the drawings will not be held in abeyance.

3.   The drawings are objected to because S206 has interrupt spelled as interup. Corrected

drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to

avoid abandonment of the application. Any amended replacement drawing sheet should include

all of the figures appearing on the immediate prior version of the sheet, even if only one figure is

being amended. The figure or figure number of an amended drawing should not be labeled as

"amended." If a drawing figure is to be canceled, the appropriate figure must be removed from

the replacement sheet, and where necessary, the remaining figures must be renumbered and

appropriate changes made to the brief description of the several views of the drawings for

consistency. Additional replacement sheets may be necessary to show the renumbering of the

remaining figures. Each drawing sheet submitted after the filing date of an application must be

labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR

1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and

informed of any required corrective action in the next Office action. The objection to the

drawings will not be held in abeyance.

Claim Objections

4.   Claim 1 objected to because of the following informalities: the last limitation reads '**a**

receiving portion ... (prepositional phrase) ... not to use said controlling portion'. Examiner

objects to the clarity of the phrasing of the limitation and requests that the final limitation be

written in proper clear English, using appropriate punctuation where needed, in order to be clear

on what is claimed. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5.   Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Nakazato et al. (US

6094546) hereafter as Nakazato.

Regarding claim 1, Nakazato teaches **a printing system (Fig. 1) comprising:**

a printing portion (Fig. 1, printer engine 30),

a controlling portion for controlling said printing portion (Fig. 1 printer controlling

section 27),

a power saving mode (Fig. 6 shows printer states, including power saving state) **for**

stopping a supply of a power source to at least said controlling portion (col. 9 lines 13-19

teach that all of the functions of printer controlling section 20 and printer engine 30 are disabled

[which includes printer controlling section 27] except logic functions for receiving commands

[ref. no. 22]),

a deciding portion (inherent to the printer due to its ability to shift into power-saving

state during idle time; Fig. 6, col. 1 lines 6-7 and 62-62) for deciding a shift from a normal

mode to the power saving mode (idle mode to power-saving state, Fig. 6);

a setting portion (Fig. 1 host computer 10) for setting communication control

information (host computer 10 includes printer driver 11 that sets all communication control

information that communicates control information to the printer) used in the shift from the

power saving mode to the normal mode after the shift to the power saving mode is decided

by said deciding portion (warm-up command information is set and communicated to printer,

Fig. 2 S7); and

a receiving portion (Fig. 1 command analyzing section 22) for receiving data based on

the communication control information set by said setting portion (receives command

information communicated by the host computer 10) in the shift from the power saving mode

to the normal mode (warm-up command from host) not to use said controlling portion

(command analyzing section does not use controlling portion 27 in the warm up command, the

command is analyzed in 22 and then the warm up is transmitted to temperature controlling

section 25 for starting the warm up).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

6.   Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nakazato as

applied to claim 1 above, and further in view of Yoshida et al. (US 6636327) hereafter as

Yoshida.

Regarding claim 2, which depends from claim 1, while Nakazato teaches connecting the

printer to an upper system (host 10) via a bidirectional interface 7 (Fig. 1) and a command

analyzing section 22 that analyzes incoming commands to see how to process them from the

upper system 10, Nakazato does not specifically teach that the bidirectional interface is a **serial**

bus or that the command analyzing section **decides whether or not information is directed to**

own system, by referring an address area in a packet, and responds to only the information

addressed to own system.

Yoshida teaches connecting apparatuses in a printing system (Fig. 1) that are connected

via a **serial bus** for the transmitting of data bidirectionally (between C and H for example).

Yoshida further teaches that along the serial bus, packets are transferred that include address

information so that the receiving device can check whether the packet is for it or not in order to

respond to it or not (see Fig. 9, packet shown with destination ID).

It would have been obvious to use a serial bus for the bidirectional interface of Nakazato

that uses packets to send data. The motivation for doing so would have been to provide a high

speed communication for possibly multiple devices where the devices know where and how to

respond to the commands over the network (see col. 4 lines 42-50 and col. 2 lines 1-10 of

Yoshida for explanation of the benefits of using the taught serial bus).

7.   Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nakazato as

applied to claim 1 above, and further in view of Yamanaka (US 6268925).

Regarding claim 3, which depends from claim 1, while Nakazato teaches a bidirectional

interface 7 (Fig. 1) that connects the printing device to the upper system (host device 10) and that

said deciding portion decides a mode shift by detecting change of an input control signal

(deciding portion must receive warm up [mode shift] command from the host system 10 via the

interface 7 in order to initiate warm up of the printer engine 30), Nakazato does not specifically

teach that the bidirectional interface 7 is a parallel bus.

Yamanaka teaches connecting a host machine (upper system) with a printer via a **parallel**

bus (Fig. 2, bus 80).

It would have been obvious to one of ordinary skill in the art that the parallel interface

could be used in the system of Nakazato because it is a bidirectional interface for connecting a

printer to a host. The motivation for connecting a parallel bus in the system would be for fast

communication, which in general is faster than serial communication because multiple lines

carry data instead of just one.

8.   Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakazato

in view of Gringeri et al. (US 6233226) hereafter as Gringeri.

Regarding claim 4, Nakazato teaches **a printing system** (Fig. 1) **comprising:**

a printing portion (Fig. 1, printer engine 30),

a controlling portion for controlling said printing portion (Fig. 1 printer controlling

section 27),

a power saving mode (Fig. 6 shows printer states, including power saving state) for

stopping a supply of a power source to at least said controlling portion (col. 9 lines 13-19

teach that all of the functions of printer controlling section 20 and printer engine 30 are disabled

[which includes printer controlling section 27] except logic functions for receiving commands

[ref. no. 22]),

storing portion for storing received data (Fig. 1 memory 26 stores data for printing);

deciding a receiving speed (Fig. 2, step S7-S10, wherein the planning of when and how

to send the data is set in order to get the data to the printer at the time when it has warmed up,

thus the receiving speed is at decided to be zero because the host system is generating the data

during warm up and sends to printer when done generating) based on a returning time from

the power saving mode to a normal mode (printer warm-up time calculating section

determines a returning time to the idle [normal] state);

receiving portion for receiving data in a shift from the power saving mode to the

normal mode to store the data in said storing portion (command analyzing section receives

the image data from the system, wherein data is spooled from the host computer 10 to the printer

during a warm up period [Fig. 2 S10] after the warm-up command has been sent [Fig. 2 S7]).

While Nakazato teaches transmitting the data to the printer controlling section 20 via a

bidirectional interface 7, Nakazato does not specifically teach deciding a receiving speed to send

the data at based on the capacity of printer memory or the returning time.

Gringeri teaches a system for transferring data between devices connected in via

bidirectional interfaces (Fig. 1) that includes determining transmission speed based on capacity

of the receiver memory buffer (Fig. 5 S.32, col. 17 line 66 – col. 18 line 8, wherein data

transmission rates between devices on a network are determined by the capacity of the receive buffer).

It would have been obvious to control the transmission of data in the system of Nakazato with the transmission rate determination of Gringeri. The motivation for doing so would have been to prevent memory errors from receiving data too fast causing overflows at the receiving device (printer).

Regarding claim 5, which depends from claim 4, Gringeri further teaches **deciding portion decides dynamically the receiving speed in view of a residual capacity of said storing portion** (the transmission rate is determined dynamically for each frame [see S.40 of Fig. 5] based on the buffer free [residual] capacity).

9.   Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nakazato and Gringeri as applied to claim 4 above, and further in view of Yoshida.

Regarding claim 6, which depends from claim 4, while the combination teaches connecting the printer to an upper system (Nakazato, host 10) via a bidirectional interface 7 (Fig. 1) and a command analyzing section 22 that analyzes incoming commands to see how to process them from the upper system 10, the combination does not specifically teach that the bidirectional interface is a **serial bus** or that the command analyzing section **decides the receiving speed based on setting of a data payload in a packet in receiving serial data from the upper system.**

Yoshida teaches connecting apparatuses in a printing system (Fig. 1) that are connected via a **serial bus** for the transmitting of data bidirectionally (between C and H for example).

Yoshida further teaches that along the serial bus, packets are transferred that include payload information in order for the system to determine how much data is being sent in the transmission (see Fig. 9, packet shown data length).

It would have been obvious to use a serial bus for the bidirectional interface of Nakazato that uses packets to send data including payload information. The motivation for doing so would have been to provide a high speed communication for possibly multiple devices where the devices know where and how to respond to the commands over the network (see col. 4 lines 42-50 and col. 2 lines 1-10 of Yoshida for explanation of the benefits of using the taught serial bus). Further, the motivation for using payload information is stated above, thus being that the system knows how much data is being sent between systems and can accommodate the transfer based on transmission size information.

Regarding claim 7, which depends from claim 4, using the serial bus and packets of Yoshida as obvious above would also include **deciding portion decides the receiving speed based on a rate of notices** (the rate of signals that are sent back informing of unsuccessfully sent packets is necessarily a factor in determining receiving speed because if the sending device must resend many packets, the receiving speed of the job is altered to accommodated for the resending of packets) **informing that reception is normally completed** (Fig. 8 shows the acknowledge signal that is sent back when the packet has been transmission; col. 9 lines 11-15 further shown in Fig. 12), **and notices informing that the reception is not normally completed** (if there is a CRC error, the acknowledgement would include an unsuccessful sending; col. 9 lines 16-22), **in replying a receiving response to the upper system** (the acknowledge response is sent back to the sender, thus the host system of Nakazato).

10.   Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nakazato and

Gringeri as applied to claim 4 above, and further in view of Yamanaka.

Regarding claim 8, which depends from claim 4, while the combination teaches a

bidirectional interface 7 (Nakazato, Fig. 1) that connects the printing device to the upper system

(host device 10) and that **said deciding portion decides a mode shift by detecting change of**

an input control signal (deciding portion must receive warm up [mode shift] command from the

host system 10 via the interface 7 in order to initiate warm up of the printer engine 30), the

combination does not specifically teach that the bidirectional interface 7 is a parallel bus.

Yamanaka teaches connecting a host machine (upper system) with a printer via a **parallel**

bus (Fig. 2, bus 80).

It would have been obvious to one of ordinary skill in the art that the parallel interface

could be used in the system of Nakazato and Gringeri because it is a bidirectional interface for

connecting a printer to a host. The motivation for connecting a parallel bus in the system would

be for fast communication, which in general is faster than serial communication because multiple

lines carry data instead of just one.

Conclusion

11.   The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure.

US-5550637, Murakami, 8-27-1996: teaches a power-saving printer which controls

fixing device based on print data presence.

US-6091515, Kimura, 7-18-2000: teaches an image forming system including an image

forming apparatus having an energy saving mode controllable by an external device.

US-6701372, Yano et al., 3-2-2004 : teaches a data communication apparatus and method

including controlling data transmission rates based on buffer sizes.

12.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Lucas Divine whose telephone number is 571-272-7432. The

examiner can normally be reached on Monday - Friday, 7:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, David Moore can be reached on 571-272-7437. The fax phone number for the

organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KING Y. POON
PRIMARY EXAMINER

Lucas Divine
Examiner
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